Liverpool John Moores University

Title:	MOBILE COMPUTING
Status:	Definitive
Code:	**6018COMP** (102994)
Version Start Date:	01-08-2011
Owning School/Faculty:	Computing and Mathematical Sciences
Teaching School/Faculty:	Computing and Mathematical Sciences

Team	Leader
Paul Fergus	Y

Academic Level:	FHEQ6	**Credit Value:**	12.00	**Total Delivered Hours:**	38.00
Total Learning Hours:	120	**Private Study:**	82		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	12.000
Tutorial	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	AS1	A practical application	25.0	
Exam	AS2	Examination	75.0	2.00

Aims

To develop an in-depth understanding of the theory and practice of mobile computing.
To discuss current developments in mobile computing;
To provide an in-depth study of the mobile devices, applications and middleware services for the support of mobile systems.

Learning Outcomes

After completing the module the student should be able to:

1 Critically review the structure of mobile computing architectures such as mobile telephony.
2 Apply in-depth knowledge of the approaches and practices used to build mobile communication and computing infrastructure.
3 Critically evaluate the provision of mobile computing and their impact on mobile systems design.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Practical	2	3
Exam	1	2

Outline Syllabus

Mobile Telephony: GSM and CDPD systems.
Mobile IP: Mobility for computers.
Privacy, Authentication and Mobility. Two sessions exploring the way the mobile telephony and mobile IP communities handle privacy and authentication.
Power Management: Power Management for storage, network,and CPU.
Environmental Awareness: Finding services in the Mobile environment.
Ubiquitous Computing.
Mobile File Systems (Disconnected Operation). A three-part history of mobile application support, fron disconnected to always connected.
Mobile applications (Intermittent Connectivity)
Mobile applications (Continuous Connectivity)

Learning Activities

Practical laboratory exercises, supporting the lectures and tutorials.

References

Course Material	Book
Author	Helal, A.
Publishing Year	1999
Title	Anytime, Anywhere Computing: Mobile Computing Concepts and Technology
Subtitle	
Edition	

Publisher	Kluwer Academic
ISBN	0792386108

Course Material	Book
Author	Mallick, M.
Publishing Year	2003
Title	Mobile and Wireless Design Essentials
Subtitle	
Edition	
Publisher	Wiley
ISBN	0471214199

Course Material	Book
Author	Morris, B.
Publishing Year	2007
Title	The Symbian OS Architecture Sourcebook
Subtitle	
Edition	
Publisher	Symbian Press
ISBN	0470018460

Course Material	Book
Author	Schiller, J.
Publishing Year	2004
Title	Mobile Communications
Subtitle	
Edition	2nd Edition
Publisher	Addison-Wesley (Pearson)
ISBN	0321123816

Notes

Ubiquitous access to information, anywhere, anyplace, and anytime, will characterize whole new kinds of information systems in the 21st Century. These are being enabled by rapidly emerging mobile communications systems, based on radio and infrared transmissions mechanisms, and utilizing such technologies as cellular telephony, personal communications systems, wireless PBX's, and wireless local area networks. These systems have the potential to dramatically change society as workers become less tied to particular locations.

The module reading will also comprise contemporary reading from recent journals and conferences, and the list will be evaluated and updated each year.